

REMARKS

Applicant amended independent claim 1 to remove “communicating transport layer protocol formatted data,” and instead recite that the establishing of the first session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier. Support for this feature is provided throughout the originally filed application, including, for example, at page 7, line 12, to page 8, line 9. Applicant similarly amended independent claims 11 and 26.

Additionally, applicant amended claim 33 to make the language recited therein consistent with the language of the independent claims. Applicant further amended claim 34 to clarify that forward mode communication between the forwarder/relay service and the destination computer system does not use any proxy network protocol, whereas relay mode communication uses a proxy network protocol. Support for this clarification is provided, for example, at page 8, line 10, to page 9, line 9 of the originally filed application. Applicant also canceled claims 31, 35 and 37.

After these amendments, claims 1-3, 7-19 and 26-30, 32-34, 36 and 38 are pending. Claims 1, 11 and 26 are independent.

The examiner rejected claims 1, 11, 26 and 34 under 35 U.S.C. §112, second paragraph.

In view of the amendments to claims 1, 11, 26 and 34, applicant submits that the 112 rejections and objections are now moot.

The examiner maintained his rejections of claims 1-3, 7-9 and 10-19 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,754,707 to Richards et al., in view of U.S. Patent No. 6,421,732 to Alkhatib et al., and in view of U.S. Patent No. 5,564,070 to Want et al. In addition, the examiner maintained his rejections claims 26-30 35 U.S.C. §103(a) as being unpatentable over Richards, in view of Alkhatib, in view of Want, and in view of U.S. Patent No. 6,185,606 to Bereiter.

As amended claim 1 recites “establishing a first session between the source computer system and a forwarder/relay service, wherein establishing the first session includes processing

data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier.” As explained in the originally filed application:

In addition, the S/FT layer 43 establishes a firewall traversing session, or tunneling session, that allows data communication between the source endpoint 5 and the IP forwarder/relay service 15. The S/FT layer 43 automatically determines the appropriate proxied protocol, such as HTTP, FTP or SOCKS4/5, to use to tunnel application data through a firewall. (page 7, lines 12-18 of the originally filed application)

Applicant's method enables application data to be sent to the forwarder/relay service through an available firewall proxy(s) by processing the data to represent it using a proxy network protocol corresponding to the available firewall proxy so that the processed data is configured to tunnel through that firewall proxy. The forwarder/relay service subsequently establishes a second session with the destination computer system, and communicates the data it received from the source computer system to the destination.

In contrast, none of the cited references describes the feature of “establishing a first session between the source computer system and a forwarder/relay service, wherein establishing the first session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier.”

Richards describes a secure computer system that includes a central computer (referred to as a “nexus”) that facilitates communication between two or more client software programs across wide area networks, including the Internet, where they would normally not be able to communicate with each other (col. 4, lines 55-62). To enable communication between two such client programs, the system uses a communication link called an upspout, which is a communication link from one of the software clients to the nexus through which the client can send information, and downspouts which are communication links from the nexus to the clients through which the nexus sends information (including data, as well as statistical and control information) to the clients (col. 5, lines 11-30). For example, as Richards explains:

To communicate with the client 130, the client 120 sends an upspout 126 through its send communication module 124. The information relayed through the upspout 126 is handled by the nexus incoming communications module 114. The incoming communication module 114 in turn relays the

message transmitted by the client 120 through the downspout 128. (FIG. 1, and col. 5, lines 24-30)

While Richards uses an intermediate service (i.e., the nexus) to establish a communication link between two clients, Richards fails to describe that when sending data from one client to another across a connectivity barrier, the data is represented by a proxy network protocol to enable the data to be tunneled through the connectivity barrier. Richards does not provide any detail regarding the processing of the data that is communicated between any two clients, and certainly does not disclose to represent the data using a proxy protocol for tunneling the processed data through a connectivity barrier. Accordingly, Richards neither discloses nor suggests at least "establishing a first session between the source computer system and a forwarder/relay service, wherein establishing the first session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier," as required by claim 1.

Alkhatib describes an IPNet Gateway that maps multiple servers on a private IP network to a single IP address on the Internet. Nowhere does Alkhatib describe using an intermediary system, such as a forwarder/relay service. Alkhatib also does not describe establishing a communication link between a computer and such an intermediary system, and Alkhatib certainly does not describe establishing a communication link where a connectivity barrier (e.g., a firewall) exists between the computer and the intermediary system. Therefore, Alkhatib neither describes nor suggests at least "establishing a first session between the source computer system and a forwarder/relay service, wherein establishing the first session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier," as required by claim 1.

Want describes a system for maintaining processing continuity in a network having a network accessible application and an intermittently connected wireless system (Abstract). Particularly, as seen in FIG. 3, and as described in col. 4, line 63 to col. 5, line 4:

Each mobile computer in the workplace environment is assigned at least one agent. The agent operates primarily for the benefit of its assigned computer. For example, agents are responsible for "knowing" the location of their assigned computers. All communications routed to and from a

mobile computer goes through its agent. As the mobile computers in the present invention run applications on remote hosts, all communications between the mobile computer and its applications are mediated by its agent.

While Want describes that data communicated from the mobile units to their agents include packets (see, for example, cols. 9 and 10), and that such communications may be based on User Datagram Protocol (see col. 10, lines 5-7), nowhere does Want describe that data is processed to represent the data using a proxy network protocol so that the processed data is configured to tunnel through a connectivity barrier. Indeed, Want does not describe at all the use of connectivity barriers and thus Want's system would not have to process data so that the data can be tunneled through a connectivity barrier. Thus, Want does not disclose or suggest at least "establishing a first session between the source computer system and a forwarder/relay service, wherein establishing the first session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier," as required by claim 1.

Since none of the references cited by the examiner discloses or suggests, alone or in combination, at least "establishing a first session between the source computer system and a forwarder/relay service, wherein establishing the first session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier," applicant's independent claim 1 is therefore patentable over the cited art.

Claims 2-3 and 7-10 and 32-34 depend from independent claim 1. Accordingly, claims 2-3, 7-10 and 32-34 are patentable over the cited art for at least the same reasons as independent claim 1.

Independent claim 11 recites "establishing a session between the source computer system located behind a first connectivity barrier and a forwarder/relay service, wherein establishing the session includes processing data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier." Accordingly, for reasons similar to those provided with respect to independent claim 1, at least this feature is not disclosed by the cited art. Applicant's independent claim 11 is therefore patentable over the

cited art. Claims 12-19 and 36 depend from independent claim 11 and are therefore patentable for at least the same reasons as independent claim 11.

As noted above, the examiner rejected claim 26 under 35 U.S.C. §103(a) as being unpatentable over Richards, in view of Alkhatib, in view of Want, and in view of Bereiter.

Applicant's independent claim 26 recites "assign a server to handle a first session between the first computer system and a forwarder/relay service, wherein the first computer system processes data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier."

Bereiter describes an adaptive messaging system to enable machines separated by firewalls and poorly connected networks to communicate effectively (col. 1, lines 31-35). Particularly, two endpoint machines, such as machines 30 and 32 shown in FIG. 2, attempt to establish point-to-point connection between them. If the two machine cannot establish a direct point-to-point connection, the message that is to be sent from one machine to the other is encapsulated inside an e-mail attachment and sent to the destination machine via e-mail using the e-mail subsystem 36 (FIG. 2, col. 3, line 62, to col. 4, line 8, and col. 5, lines 4-28). However these teachings of Bereiter fail to describe or suggest an endpoint machine that establishes a session with an intermediary system such as applicant's forwarder/relay service, or that data is processed to represent the data using a proxy network protocol so that the processed data is configured to tunnel through a connectivity barrier. Thus, Bereiter does not disclose or suggest at least "assign a server to handle a first session between the first computer system and a forwarder/relay service, wherein the first computer system processes data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier," as required by claim 26.

As discussed above with respect to independent claim 1, none of Richards, Alkhatib and Want discloses or suggest at least "wherein the first computer system processes data to represent the data using a proxy network protocol so that the processed data is configured to tunnel through the first connectivity barrier." And Bereiter fails to cure these deficiencies in the other cited references. Therefore claim 26 is patentable over the cited art.

Claims 27-30 and 38 depend from independent claim 26 and are therefore patentable for at least the same reasons as independent claim 26.

It is believed that all the rejections and/or objections raised by the examiner have been addressed.

In view of the foregoing, applicant respectfully submits that the application is in condition for allowance and such action is respectfully requested at the examiner's earliest convenience.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.


Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

No fees are believed due. Please apply any other charges or credits to deposit account 06-1050, referencing attorney docket 10559-227001.

Respectfully submitted,

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